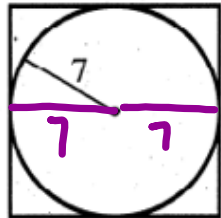


38. A square is circumscribed about a circle of 7-foot radius, as shown below. What is the area of the square, in square feet?

- F. 49
- G. 56
- H. 98
- J. 49π
- K. 196



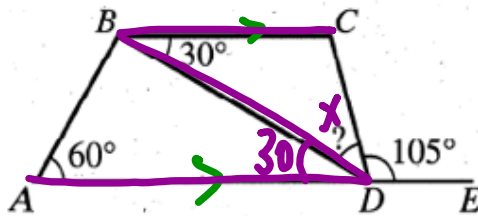
$$(14)^2 = 196$$

39. The ratio of the side lengths for a triangle is exactly 12:14:15. In a second triangle similar to the first, the shortest side is 8 inches long. To the nearest tenth of an inch, what is the length of the longest side of the second triangle?

- A. 11.0
B. 10.0
C. 9.3
D. 6.4
E. Cannot be determined from the given information

$$\frac{12}{8} = \frac{15}{X}$$
$$12X = 120$$
$$X = 10$$

40. In the figure below, $ABCD$ is a trapezoid, E lies on \overleftrightarrow{AD} , and angle measures are as marked. What is the measure of $\angle BDC$?

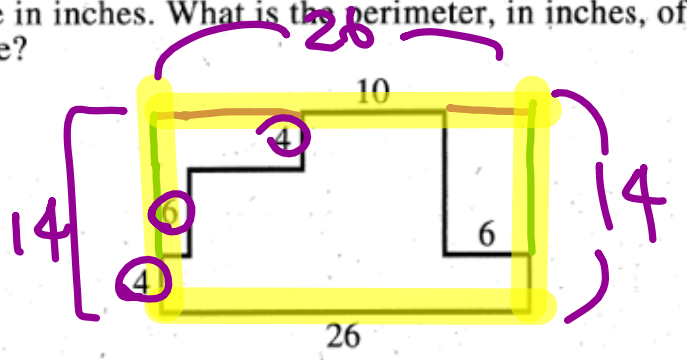


- F. 15°
- G. 25°
- H. 30°
- J. 35°
- K. 45°

$$30 + x + 105 = 180$$
$$x = 45$$

41. In the figure shown below, each pair of intersecting line segments meets at a right angle, and all the lengths given are in inches. What is the perimeter, in inches, of the figure?

- A. 40
 B. 52
 C. 56
 D. 66
 E. 80



$$14 + 26 + 14 + 26 = 80$$

42. Of the 804 graduating seniors in a certain high school, approximately $\frac{2}{5}$ are going to college and approximately $\frac{1}{4}$ of those going to college are going to a state university. Which of the following is the closest estimate for how many of the graduating seniors are going to a state university?

- F. 80
- G. 90
- H. 160
- J. 200
- K. 320

$$804 = \frac{1}{4} \left[\frac{2}{5} (804) \right]$$

43. If x and y are positive integers such that the greatest common factor of x^2y^2 and xy^3 is 45, then which of the following could y equal?

- A. 45
- B. 15
- C. 9
- D. 5
- E. 3

$$xy^2 = 45$$

$y = 1, 3$

1	45
3	15
5	9

44. If 115% of a number is 460, what is 75% of the number?

- F. 280
- G. 300
- H. 320
- J. 345
- K. 400

$$1.15x = 460$$

$$x = 400$$

$$.75x = ?$$

$$= 300$$

45. What is the distance in the standard (x,y) coordinate plane between the points $(1,0)$ and $(0,5)$?

A. 4

B. 6

C. 16

D. 36

E. $\sqrt{26}$

$$d = \sqrt{(1-0)^2 + (0-5)^2}$$

$$= \sqrt{1+25}$$